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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHEN, SHIN HON

ART UNIT PAPER NUMBER

2131

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/911,886

Applicant(s)

OKAUE, TAKUMI

Examiner

Shin-Hon Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-12, 14-22, 24-30 and 32-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-12, 14-22, 24-30, and 32-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

AT

DETAILED ACTION

1. Claims 1-4, 6-12, 14-22, 24-30, and 32-36 have been examined.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 6-11, 14-18, 19-21, 24-29, and 32-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Marshall et al. U.S. Pat. No. 4933969 (hereinafter Marshall).

4. As per claim 19, 27, and 36, Marshall discloses a data processing apparatus for (a) generating a verifying value for verifying an individual contents data to be stored in the memory device (Marshall: column 1 line 66 – column 2 line 5), (b) storing the verified value in the memory device in correspondence with the contents data (Marshall: column 2 lines 25-30), and (c) checking to probe actual occurrence or absence of the act of tampering with said contents data by referring to said verifying value (Marshall: column 2 lines 48-54), comprising: a ciphering unit for generating said verifying value (Marshall: column 1 line 66 – column 2 line 5: generating MAC values); and one or more keys for use by said ciphering unit to generate said verifying value (Marshall: column 2 lines 30-36: generating individual MACs and group MAC and the system may be hierarchical; column 3 lines 15-27: preferably a hierarchy of two or more keys is used); whereby said processing apparatus is operable to generate a verifying value for

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each category of a plurality of categories of contents data stored in said memory device (Marshall: column 2 lines 30-47: each block has its own MAC and hierarchy of data).

5. As per claim 20 and 28, Marshall discloses the data processing apparatus of claims 19 and 27 respectively. Marshall further discloses wherein the device computes the verifying value based on data from the individual contents data (Marshall: column 2 lines 25- 47) and then compares the computed verifying value to a previously stored verifying value, and finally utilizes the individual contents data solely in the case in which both values are identified to be coincident with each other (Marshall: column 2 lines 25-60).

6. As per claim 21 and 29, Marshall discloses the data processing apparatus of claims 19 and 27 respectively. Marshall further discloses wherein said plurality of categories respectively correspond to a plurality of directories (Marshall: column 2 lines 6-30); and wherein the verifying value is generated to deal with an assemblage of contents data individually corresponding to the plurality of directories (Marshall: column 2 lines 25-47).

7. As per claim 24 and 32, Marshall discloses the data processing apparatus of claims 19 and 27 respectively. Marshall further discloses wherein said plurality of categories are preset and each corresponds to a node in a hierarchical structure of categories (Marshall: column 2 lines 31-36; column 3 lines 9-35).

8. As per claim 25 and 33, Marshall discloses the data processing apparatus of claims 19 and 27 respectively. Marshall further discloses wherein the verifying value is individually generated based on a message authentication code, which is generated by applying a Data Encryption Standard to a partial data message comprising data to be subject to verification via said verifying value (Marshall: column 1 lines 33-37: use DES to generate MAC).

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9. As per claim 26, Marshall discloses a data processing apparatus comprising: a memory device for storing contents data; and a device for (a) generating and storing message authentication codes functioning themselves as the data for probing an act of tampering with the stored contents data (Marshall: column 1 line 66 – column 2 line 5), (b) generating a plurality of message authentication codes from different data domains, wherein part of the data domains used for generating said message authentication codes therein comprise common data (Marshall: column 2 lines 25-47; column 3 lines 15-27); and (c) renewing the common data whenever renewing any of the plural message authentication codes for use in renewing other message authentication codes (Marshall: column 2 line 61 – column 3 line 8); whereby said processing apparatus is operable to use one or more of said message authentication codes to generate a verifying value for each category of a plurality of categories of contents data stored in said memory device (Marshall: column 2 lines 24-47 and column 3 lines 15-27).

10. As per claim 34, Marshall discloses a method of claim 27 further comprising the steps of: generating a plurality of message authentication codes from different data domains (Marshall: column 2 lines 25-47; column 3 lines 15-27), wherein part of the data domains used for generating said message authentication codes therein comprise common data (Marshall: column 2 lines 25-47; column 3 lines 15-27); and renewing the common data whenever renewing any of the plural message authentication codes for use in renewing other message authentication code (Marshall: column 2 line 61 – column 3 line 8).

11. As per claim 35, Marshall discloses a method for use in a data processing apparatus, the method comprising the steps of: generating a plurality of message authentication codes from different data domains (Marshall: column 2 lines 25-47; column 3 lines 15-27), wherein part of

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the data domains used for generating said message authentication codes therein comprise common data (Marshall: column 2 lines 25-47; column 3 lines 15-27); and renewing the common data whenever renewing any of the plural message authentication codes for use in renewing other message authentication code (Marshall: column 2 line 61 – column 3 line 8); and using one or more of said message authentication codes to generate a verifying value for each category of a plurality of categories of contents data stored in a memory of said processing apparatus (Marshall: column 2 lines 24-47); wherein said verifying values are used in an operation that provides an indication of whether or not there has been tampering with said contents data (Marshall: column 2 lines 48-60).

12. As per claim 1-3, 6-11, 14-18, claims 1-3, 5-11, 13-18 encompass the same scope as claims 19-21, 24-29, and 32-36. Therefore, claims 1-3, 5-11, 13-18 are rejected based on reasons set forth in claims 19-21, 23-29, and 31-36.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 4, 12, 22, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view of Campardo et al. European Pat. Pub. No. EP 0926601 (hereinafter Campardo).

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15. As per claim 22 and 30, Marshall discloses the data processing apparatus of claims 19 and 27 respectively. Marshall does not explicitly disclose wherein the memory device comprises a flash memory; and the verifying value associated with the category is stored in a domain preset as a utilization inhibited block in said flash memory. However, Campardo discloses semiconductor memory capable of storing protection code into protected memory portion (Campardo: abstract and [0022], [0034], and [0035]). It would have been obvious to one having ordinary skill in the art to store verifying value into a protected memory region of a memory device because verifying value is supposed to be protected. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Campardo within the system of Marshall because it prevents verifying value/protection code from tampering.

16. As per claim 4 and 12, claims 4 and 12 encompass the same scope as claims 22 and 30. Therefore, claims 4 and 12 are rejected based on the reasons set forth in claims 22 and 30.

Response to Arguments

17. Applicant's arguments filed on 7/5/05 have been fully considered but they are not persuasive.

18. Regarding applicant's remarks, applicant argues that Marshall reference does not disclose generating verifying value for each category of a plurality of categories of contents data. However, Marshall discloses that there is a hierarchy of contents data and each level of the hierarchy can be viewed as a category of data. Therefore, applicant's argument is respectfully traversed.

Conclusion

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (571) 272-3789. The examiner can normally be reached on Monday through Friday 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shin-Hon Chen
Examiner
Art Unit 2131

SC

SH
Primary Examiner
AU2131
9/27/05